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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,321	11/26/2003	David G. Shaw	56770US035	9479
32692	7590	12/14/2005	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			PADGETT, MARIANNE L	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/723,321

Applicant(s)

SHAW ET AL.

Examiner

Marianne L. Padgett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

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1. As was indicated in the 11/16/2005 interview the amendment of the independent claim to require that the smoothing layer the acrylate smoothing layer has removed the rejection over the Williams et al. reference.

Applicants' discussion in the remarks on pages 8-9 of the 10/3/2005 response concerning their intended meaning of "transparent" is considered sufficient to provide a clear meaning or scope for this term, especially in combination with the amendments to the claim, so as to remove it from the 112 second paragraph rejection.

2. Claims 10-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Use of relative terms in the claims that lack clear metes and bounds in the claim or in the specification or in cited relevant prior art, is vague and indefinite. As previously rejected (section 6 of the June 2005 action), in line 4 of claim 10 "smoothing" in "smoothing layer" remains considered a relative description of an effect, since there is no necessary roughness there would not necessarily be any surface on the substrate that necessarily needs any smoothing, so the scope of this effect and what is included by "smoothing layer" remains uncertain. Sections of the specification cited by applicant had already been studied and found insufficient, and it is noted that mere recitation of the smoothing layer being acrylic does not necessitate any inherent degree of smoothness or roughness, however it is conceded that for claim 12, which also requires the particular type of flash evaporation deposition be employed, which might have been expected to enhance smoothing effects for the acrylate monomer that some inherent meaning or range for smoothing could be argued. Also the possibility of defining this limitation via the addition of functional language to refine the meaning was discussed in the interview.

In claim 12 as amended, "protective" describing "protective layer" remains also a relative term, as there are a great many things which may be generically protected against, such that the context in the

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claim is not sufficiently defined an applicant's explanation on page 10 of the remarks is not considered sufficient to remove this uncertain scope.

In claim 13, it is unclear as written, how this sequence of further layer depositions combines with the now required protective layer in the independent claim, which requires the protective layer to be applied to the oxygen barrier material, which in claim 13 is not the top layer and has not been related to any of the new layers deposited therein.

Question: is applicant intending to exclude in claim 10 silicon dioxide, which is disclosed on page 22 of the specification as a barrier layer material from use in this claim? In general silicon is not considered to be a metal, so unless the specification actually defines silicon as a metal or silicon dioxide as a metal oxide, it is generally not considered to be a metal oxide, however given that there is no generic disclosure in the specification of metal oxides, only disclosures of metal barrier layers, or oxide barrier layers, or specific examples of silicon dioxide or alumina, the intent provided by this amendment is uncertain.

3. Claims 10-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

While the claims have been narrowed such that smoothing layer is now required to be an acrylate layer, the new matter concerns of section 9 of the June 2005 action remain relevant in that applicant's specification does not provide support for all acrylate layers deposited by any means being used to affect smoothing of unspecified amounts or degree. For example as claimed means of depositing acrylate such as curtain coating or sheet lamination would be included by the claim language but are not supported by the specification, thus while improved it does not appear that all new matter has been eliminated.

While oxide barrier layers or metal barrier layers (page 21), or silica or alumina as barrier layers (page 22) are supported, it is unclear that applicants have enablement in their specification to claim all metal oxide barrier layers as has been newly introduced into claim 10, as well as the above question of whether it is excluding silica.

While there is generic (undefined) disclosure of “transparent barrier film”, the only disclosure of sputtering or plasma enhanced CVD are specific to the taught Si oxide or Al oxide, with the sputtering being specific to sputtering of aluminum or silicon in an oxygen plasma, hence these deposition processes claimed for the present breadth of “transparent barrier film” include New Matter also.

On page 21, lines 23 - 24 provide support for a second acrylate layer deposited on the [Si or Al] oxide barrier layer disclosed in the paragraph preceding it, and while the rest of that paragraph (lines 25-29) is devoted to metal barrier layers, the line 28 statement “oxygen barriers are further enhanced by multiple layers, such as...” could be considered to include the specific transparent oxide barriers of lines 13-22, due to the paragraphs introductory sentence, hence claim 13’s recitation of 3 or more layers will not be considered to introduce more New Matter.

In claim 10, the use of a generic “protective layer” on the transparent barrier film, also is inclusive of New Matter, since it is broader than the scope of the only disclosed layer (acrylate) that was taught as deposited on the oxygen barrier material, as discussed previously.

4. The amendment filed 10/3/2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: pages 2 and 22 were disclosures that were previously solely directed to metal layers were metallization, have been amended to either be generic disclosure of a film or to include an oxide layer as an alternative to a metal layer or for reasons of previously cited sections of the specification the examiner is not convinced that this is not broadening of the scope which would be New Matter.

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Applicant is required to cancel the new matter in the reply to this Office Action or clearly show why the original specification clearly is inclusive of this amended scope.

5. Claims 10-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As discussed above, "transparent barrier film", "smoothing layer", "protective layer", sputtering and PECVD, lack enablement for their present scope in the claims.

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 10-12, 14-16 and 19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-11 and 13 of U.S. Patent No. 5,725,909. Although the conflicting claims are not identical, they are not patentably distinct from each other because of reasons as discussed in section 12 of the June 2005 action, noting that the acrylate layer in the Patton may be evaporated monomer and that the oxygen barrier layer is inclusive of aluminum oxide.

7. Claims 10-11, (12) and 13-19 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Affinito (6,497,598 B2), as discussed in section 14 of the June 2005 action.

It remains noted that while the patent providing Affinito's effective filing date is December 16, 1998, is after applicant's parents filing date, the New Matter which has not yet been completely removed and is discussed above, was in the claims filed November 26, 2003, so prevents parents filing dates from being applicable, hence November 26, 2003 may be considered to be the effective date for the claims as presently written. Claim 12, might arguably be considered supported in the parent and in the grand parent (col. 6, lines 56-62 and col.17, lines 28-59 in PN5,440,446), because a smoothing effect for the particular vapor deposited cross-linked acrylate monomers coating are discussed in same circumstances, but they

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are not clearly associated with the claimed metal oxide of the transparent barrier film, so claim 12 is listed above in parenthesis.

8. Claims 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yializis et al (4,842,893) or Shaw et al (5,032,461) in view of Komiya (EP 0,475,441 A2), as discussed in section 16 of the June 2005 action.

9. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over (Yializis et al ('893) or Shaw et al ('461), in view of Komiya (EP) ), or over Affinito as applied to claims 10-19 above, and further in view of Fujii et al (4,468,412) or Kim et al (5,403,626), especially in view of Pitt et al (5,108,780), as discussed in section 18 of the June 2005 action.

10. Applicant's arguments filed 10/3/2005 discussed above have been fully considered but they are not persuasive.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on M-F from about 8:30 a.m. to 4:30 p.m.




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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks, can be reached at (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MLP 12/12/2005



MARIANNE PADGETT  
PRIMARY EXAMINER